DOE/RL-88-21 216-A-36B Crib

	or type in the unshaded are spaced for elite type						Rev. 1, 6/30/94	
FORM 3	DAN	IGER	OUS WASTE PERMIT	Γ APPLICA	ATION		PA/STATE I.D. NUMBER	
FOR OFFICI	AL USE ONLY					<u> </u>		
APPLICATION APPROVE				COMM	MENTS			
				Pending	Appro	oval		
II. FIRST OR	REVISED APPLICAT	ION						
application. If	in the appropriate box f this is your first applicin Section I above.	in A or B cation and	below (mark one box only) to indicate wl l you already know your facility's EPA/ST	nether this is the firs ATE I.D. Number, o	st applicatio or if this is a	n you are submitti a revised application	ng for your facility or a revised n, enter your facility's EPA/STATE	
	. EXISTING FACILITY	,	and provide the appropriate date) (See instructions for definition of "existing Complete Item below.)	Ī		V FACILITY (Com	olete item below) DR NEW FACILITIES, PROVIDE	
MO. 09	15 1965		FOR EXISTING FACILITIES, PROVIDE DATE (mo., day, & yr.) OPERATION BE THE DATE CONSTRUCTION COMMENTHE boxes to the left) *The date construction of the Hanford Faces and the second seco	GAN OR ICED (use	MO. DA	THE OI	HE DATE, (mo., day, & yr.) PERATION BEGAN OR IS PECTED TO BEGIN	
	APPLICATION (place FACILITY HAS AN INT	an "X" be	commenced. elow and complete Section I above) ATUS PERMIT 2. F	ACILITY HAS A FIN	NAL PERMI	IT		
III. PROCES	S - CODES AND CAP	ACITIES						
codes. If	more lines are needed	l, enter the	the list of process codes below that best e code(s) in the space provided. If a proc the space provided on the (Section III-C	ess will be used tha				
,			ch code entered in column A enter the c		aee			
	UNT - Enter the amour							
			unt entered in column B(1), enter the cod ed below should be used.	e from the list of uni	it measure	codes below that o	lescribes the unit of measure used.	
ŕ	PROCESS	PRO- CESS CODE	APPROPRIATE UNITS OF MEASURE FOR PROCESS DESIGN CAPACITY	PR	ROCESS	PRO- CESS CODE	APPROPRIATE UNITS OF MEASURE FOR PROCESS DESIGN CAPACITY	
Storage:				Treatment:				
J	ER (barrel, drum, etc.)	S01	GALLONS OR LITERS	TANK		T01	GALLONS PER DAY OR	
TANK WASTE PI		S02 S03	GALLONS OR LITERS CUBIC YARDS OR CUBIC	SURFACE IMP	POUNDMEN		LITERS PER DAY GALLONS PER DAY OR	
	IMPOUNDMENT	S04	METERS GALLONS OR LITERS	INCINERATOR		T03	LITERS PER DAY TONS PER HOUR OR	
Disposal:							METRIC TONS PER HOUR; GALLONS PER	
INJECTIO		D80	GALLONS OR LITERS				HOUR OR LITERS PER HOUR	
LANDFILL		D81	ACRE-FEET (the volume that would cover one acre to a depth of one foot)OR HECTARE-METER	OTHER (Use for physical, chemical, thermal or biological treatment processes not			GALLONS PER DAY OR LITERS PER DAY	
LAND APP OCEAN DI	PLICATION ISPOSAL	D82 ACRES OR HECTARES D83 GALLONS PER DAY OR LITERS PER DAY		occurring in tanks, surface impoundments or incinerators. Describe the processes in the		tors.		
SURFACE	E IMPOUNDMENT	D84	GALLONS OR LITERS	space provided				
UNIT OF N	MEA	T OF SURE DDE	UNIT OF MEASURE	UNIT OF MEASURE CODE		UNIT OF MEASUR	UNIT OF MEASURE CODE	
GALLONS			LITERS PER DAY	V		ACRE-FEET	A	
LITERS CUBIC YA	ARDS	L Y	TONS PER HOUR METRIC TONS PER HOUR	D W		HECTARE-METEI ACRES	В	
GALLONS		C U	GALLONS PER HOUR LITERS PER HOUR	E H		HECTARES	Q	

EXAMPLE FOR COMPLETING SECTION III (shown in line numbers X-1 and X-2 below): A facility has two storage tanks; one tank can hold 200 gallons and the other can hold 400 gallons. The facility also has an incinerator that can burn up to 20 gallons per hour.

	B. PROCESS DESIGN CAPACITY	
A PROCESS		

LINE NUMBER	CODE (from list above)	1. AMOUNT (specify)	2. UNIT OF MEASURE (enter code)	FOR OFFICIAL USE ONLY			
X-1	S02	600	G				
X-2	T03	20	E				
1	D81	116,000	U				
2							
3							
4							
5							
6							
7							
8							
9							
10							

C. SPACE FOR ADDITIONAL PROCESS CODES OR FOR DESCRIBING OTHER PROCESS (CODE "T04"). FOR EACH PROCESS ENTERED HERE INCLUDE DESIGN CAPACITY.

D81

The 216-A-36 Crib, placed into operation in September 1965, was divided into A and B sections. The A section is the first 100 feet (30.5 meters) on the north end of the crib and is bypassed by the process pipe. The A section was closed in 1966. The B section was operational from March 1966 to October 1972, and was reactivated in November 1982 for the Plutonium-Uranium Extraction (PUREX) Plant restart. Discharges to the B section were stopped in August 1987. The mixed waste discharged to the 216-A-36B Crib came from the PUREX ammonia scrubber distillate (ASD) stream. The process design capacity for the 216-A-36B Crib was 116,000 gallons (440,000 liters) per day. The 216-A-36B Crib will be closed under interim status.

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IV. DESCRIPTION OF DANGEROUS WASTES

A. DANGEROUS WASTE NUMBER - Enter the four digit number from Chapter 173-303 WAC for each listed dangerous waste you will handle. If you handle dangerous wastes which are not listed in Chapter 173-303 WAC, enter the four digit number(s) that describe the characteristics and/or the toxic contaminants of those dangerous wastes.

- B. ESTIMATED ANNUAL QUANTITY For each listed waste entered in column A estimate the quantity of that waste that will be handled on an annual basis. For each characteristic or toxic contaminant entered in column A estimate the total annual quantity of all the non-listed waste(s) that will be handled which possess that characteristic or contaminant.
- C. UNIT OF MEASURE For each quantity entered in column B enter the unit of measure code. Units of measure which must be used and the appropriate codes are:

 ENGLISH UNIT OF MEASURE CODE

 METRIC UNIT OF MEASURE CODE

POUNDS P KILOGRAMS K
TONS T METRIC TONS M

If facility records use any other unit of measure for quantity, the units of measure must be converted into one of the required units of measure taking into account the appropriate density or specific gravity of the waste.

D. PROCESSES

1. PROCESS CODES:

For listed dangerous waste: For each listed dangerous waste entered in column A select the code(s) from the list of process codes contained in Section III to indicate how the waste will be stored, treated, and/or disposed of at the facility.

For non-listed dangerous wastes: For each characteristic or toxic contaminant entered in Column A, select the code(s) from the list of process codes contained in Section III to indicate all the processes that will be used to store, treat, and/or dispose of all the non-listed dangerous wastes that possess that characteristic or toxic contaminant.

Note: Four spaces are provided for entering process codes. If more are needed: (1) Enter the first three as described above; (2) Enter "000" in the extreme right box of item IV-D(1); and (3) Enter in the space provided on page 4, the line number and the additional code(s).

2. PROCESS DESCRIPTION: If a code is not listed for a process that will be used, describe the process in the space provided on the form.

NOTE: DANGEROUS WASTES DESCRIBED BY MORE THAN ONE DANGEROUS WASTE NUMBER - Dangerous wastes that can be described by more than one Waste Number shall be described on the form as follows:

- 1. Select one of the Dangerous Waste Numbers and enter it in column A. On the same line complete columns B, C, and D by estimating the total annual quantity of the waste and describing all the processes to be used to treat, store, and/or dispose of the waste.
- 2. In column A of the next line enter the other Dangerous Waste Number that can be used to describe the waste. In column D(2) on that line enter "Included with above" and make no other entries on that line.
- 3. Repeat step 2 for each other Dangerous Waste Number that can be used to describe the dangerous waste.

EXAMPLE FOR COMPLETING SECTION IV (shown in line numbers X-1, X-2, X-3, and X-4 below) - A facility will treat and dispose of an estimated 900 pounds per year of chrome shavings from leather tanning and finishing operation. In addition, the facility will treat and dispose of three non-listed wastes. Two wastes are corrosive only and there will be an estimated 200 pounds per year of each waste. The other waste is corrosive and ignitable and there will be an estimated 100 pounds per year of that waste. Treatment will be in an incinerator and disposal will be in a landfill.

L	DANGEROUS		C. UNIT	D. PROCESSES OF						
I N NO E .	WASTE NO.	B. ESTIMATED ANNUAL QUANTITY OF WASTE	MEA- SURE (enter code)	1. PROCESS CODES (enter)			S	PROCESS DESCRIPTION (if a code is not entered in D(1))		
X-1	K054	900	Р	T03	D80					
X-2	D002	400	Р	T03	D80					
X-3	D001	100	P	T03	D80					
X-4	D002			T03	D80			included with above		
1	WT02	265,000,000	Р	D81				Percolation		
2										
3										
4										
5										
6										
7										
8										
9										
10										

E. USE THIS SPACE TO LIST ADDITIONAL PROCESS CODES FROM SECTION D(1) ON PAGE 3.

The ASD waste stream is a basic byproduct waste stream generated by the ammonia scrubbers during decladding operations in the PUREX

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process. The waste stream came from the coating dissolution stage where ammonia fluoride and ammonia nitrate were used to dissolve the zirconium cladding from the fuel elements. Ammonia gas was produced as a byproduct during the reaction. The gas stream from the disolver was scrubbed with water, which absorbed and reacted with most of the ammonia to form liquid ammonium hydroxide. This waste stream was sent to the 216 -A-36B Crib for disposal.

This waste was determined to be state-only toxic waste (WT02) under the Washington State Department of Ecology's waste mixture rule because the concentrations of ammonium hydroxide were in excess of 1% by weight.

V. FACILITY DRAWING Refer to attached drawing(s).

All existing facilities must include in the space provided on page 5 a scale drawing of the facility (see instructions for more detail).

VI. PHOTOGRAPHS Refer to attached photograph(s).

All existing facilities must include photographs (arial or ground-level) that clearly delineate all existing structures; existing storage, treatment and disposal areas; and sites of future storage, treatment or disposal areas (see instructions for more detail).

VII. FACILITY GEOGRAPHIC LOCATION This information is provided on the attached drawing(s) and photograph(s).

	3(-,				
LATITUDE (degrees, minutes, & seconds)	LONGITUDE (degrees, minutes, & seconds)				

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VIII. FACILITY OWNER							
A. If the facility owner is also the facility operator as listed in Section VII on Form 1, "General Information", place an "X" in the box to the left and skip to Section IX below. B. If the facility owner is not the facility operator as listed in Section VII on Form 1, complete the following items:							
1. NAME OF FACILITY'S LEGAL OWNER 2. PHONE NO. (area code & no.)							
3. STREET OR P.O. BOX	4. CITY OR TOWN	5. ST.	6. ZIP CODE				
IX. OWNER CERTIFICATION							
I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.							
NAME (print or type)	SIGNATURE	DATE SIGNED					
John D. Wagoner, Manager U.S. Department of Energy Richland Operations Office	John D. Wagoner	06/30/1994					
X. OPERATOR CERTIFICATION							
I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.							
NAME (print or type)	SIGNATURE	DATE SIG	NED				
SEE ATTACHMENT							

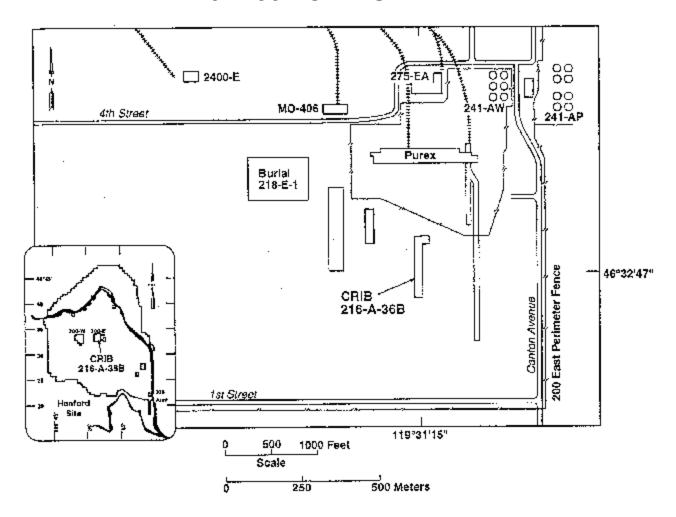
X. OPERATOR CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

John D. Wagoner	6/30/94
Owner/Operator	Date
John D. Wagoner, Manager	
U.S. Department of Energy	
Richland Operations Office	
Edward S. Keen	6/30/94
Co-Operator	Date
Edward S. Keen, President	
Bechtel Hanford, Inc.	

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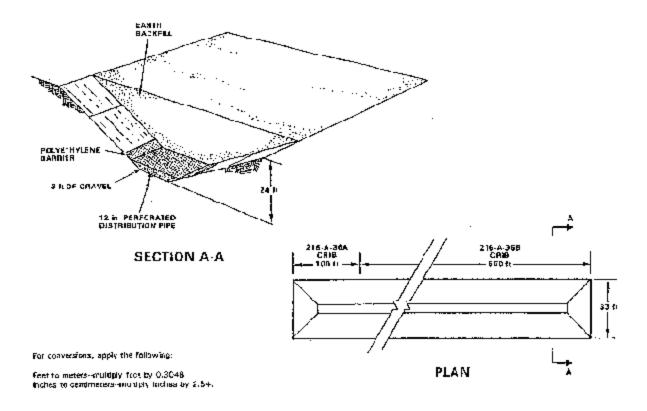
216-A-36B CRIB SITE PLAN



39405155.3

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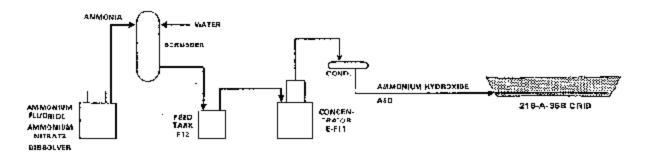
216-A-36 A AND B CRIBS



28710-023.12

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216-A-36B CRIB WASTE STREAM FLOW DIAGRAM



28710-023.24

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46°32'47" 119°31'15"

8706243-2CN (PHOTO TAKEN 1987)